

Amendment Under 37 C.F.R. § 1.111
USSN 09/512,815
Attorney Docket Q57966
November 12, 2003

REMARKS

With respect to the drawing objections set forth in paragraph 1 of the Office Action it is submitted that the shading of various materials would only be required in sectional views. The sand F shown in Figure 2 is defined by phantom lines and is not a sectional view through the sand and therefore the sand does not have to have distinctive markings. This is also true with respect to Figure 3. In Figure 4 the container is sectioned and is properly shown with cross-hatching indicating metal. There is no sand present in the container of Figure 4. Therefore, it is respectfully requested that the objections to the drawings set forth in item 1 be reconsidered and withdrawn.

With respect to the drawing objections set forth in item 2 of the Office Action, the changes indicated by the Examiner have been submitted in copies of Figures 2 and 3 with the proposed changes shown in red. However, the symbol T in Figure 2 was replaced by the designation DP. A corresponding change has also been made on page 14 of the specification wherein “plate T” has been changed to --plate DP--. Accordingly, the objections in items 2 and 4 of the last Office Action have been obviated.

In the last Office Action the specification was objected to since it did not support the terminology of Claims 27 and 28. Claim 27 was further objected to because of a specific term and Claims 27 and 28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 27 and 28 have been canceled without prejudice in order to advance the prosecution of the present application and accordingly the foregoing objections have been

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rendered moot. However, the objections with respect to claims 17 and 18 have been overcome by the foregoing amendments to claims 17 and 18 as suggested by the Examiner.

In the last Office Action claims 17-23 inclusive were rejected under 35 U.S.C. § 103(a) as being unpatentable over Edge in view of Travillian or Rikker and Claims 24-28 were rejected as being unpatentable over the same combination of references taken further in view of McMellon. Reconsideration and withdrawal of these rejections are respectfully requested in view of the following remarks.

The Examiner is correct in stating (see paragraph ending at the middle of page 6 of the Office Action) that the flexible connection given by the springs 25c in Edge (figures 8 and 9) does not keep the model(s) in a fixed firm position with respect to the container.

In the Travillian reference, it should be noticed that the pattern 12 is held in a fixed position by fixture 48 (Figure 1). However, the pattern is not fixed with respect to the sand container (the flask 10), because the fixture 48 is suspended to the lower wall 44 of the pluviation device 36. This is not fixed with respect to the flask 10 (that is subjected to vibration) and therefore cannot hold the model/pattern in a firm position with respect to the container.

As can be seen in Figure 1, the pluviation device 36 is not in contact, either directly or indirectly, with the flask 10. This is confirmed by the specification (column 3, lines 52-62):

“...Pluviation device 36 comprises an open-top sand charge container 38 for receiving a pre-determined mass of sand sufficient to fill a flask 10. The container sidewalls extend to form a skirt 42 for surrounding flask 10 during filling to minimize sand loss, but sized to be spaced

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apart from flask 10 to allow venting of pressurized gas introduced into flask 10 in accordance with this invention. Container 38 further comprises a perforated lower wall 44 through which sand sifts to form a controlled rainfall of discrete particles. Lower wall 44 has a non-perforated border 46 to avoid sand fall outside flask 10.”

The same applies also to the Rikker reference. Figures 21 and 22 show that the top 104 includes a gripping chuck 110 with jaws 114 is meant to hold the pattern 112 in the container 10 in a fixed orientation. However, no gripping means are provided for gripping the container. The top 104 is simply resting over the upper from a 58 of the container 10, whereby during the vibrational motion the model/pattern will not be kept firmly in position with respect to the container, and this will allow the model to be subject to breakage in the zone of the gripping chuck, as discussed in the introductory part of the specification of the Applicant’s invention.

In considering whether a person skilled in the art would have considered a combination of Edge with either Travillian or Rikker, the Examiner’s attention should be drawn to the statement contained in the Edge specification at column 7, lines 13-17:

“Initially, because of the ring holder R with springs 25c the pattern P can twist and move, while the layer of sand builds up from the bottom of mold 15. With this initial float which is provided, pattern P will not tend to be damaged as it would if it were rigidly held in position.”

It is submitted that a person skilled in the art, having regard to the above statement in the Edge reference, would be dissuaded from adding a gripping means to the Travillian or Rikker, or, looking at it the other way around, modifying the apparatus of Edge by adding the rigid, fixed

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model positioning means of either Travillian or Rikker. In other words, the teaching of Edge is contrary to that of the present invention and leads away from solving the underlying technical problem (i.e. present breakage/damage/distortion of the model) in the way as presently claimed in the past paragraph of Claim 17.

In view of the foregoing amendments and arguments it is submitted that claims 17-26 inclusive would not be obvious in view of the combined teachings of the various references and therefore it is respectfully requested that Claims 17-26 inclusive be allowed and the application passed to issue forthwith.

If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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